| | LTR | ENC |
|---|---|---|
| NELSON, R.M. | | |
| PAUOLE, A.H. | | |
| BISHOP, M.L. | | |
| BRAINARD, B. | | |
| CANNODE, G.R. | | |
| HARTMAN, J. | X | |
| IZELL, K. | | |
| KAROL, M.S. | | |
| McBRIDE, M.H. | | |
| SARGENT, D. | | |
| WITHERILL, V.F. | | |
| ADAMS, J.J. | | |
| ANDERSON, T.W. | | |
| CRAUN, R.L. | | |
| DUFFY, G.G. | | |
| HOFFMAN, R.B. | | |
| LEVERNIER, R.J. | | |
| LOCKHART, F.R. | X | |
| LUKOW, T.E. | | |
| OLINGER, S. | | |
| RASK, W.C. | | |
| RUSCITTO, D.G. | | |
| SCHASSBURGER | X | X |
| BAAKKEN, K.T. | | |
| GRETHEL, T. | | |
| HARGREAVES, M. | | |
| HICKS, D.A. | | |
| HUFFMAN, G.N. | | |
| MALCHESKI, D. | | |
| McCORMICK, M.S. | | |
| MILLER, H.G. | | |
| OSTMEYER, R.M. | | |
| PEWTSCH, E. | | |
| POSLUSZNY, J. | | |
| RAMPE, J. | | |
| REECE, J. | | |
| STEWARD, J.D. | | |
| VANDERPUY, M. | | |
| WALLIN, B. | | |
| SWAH | X | X |
| GRACE | X | |
| D/E | H | |
| RECORDS | H | H |



tates Government **Department of Ene**

# morandum



OCT - 5 1993

EM-453 (J. Ciocco, 903-7459)

Comments for "Operable Unit 1 881 Hillside Area Phase III Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation Report Appendix E, Environmental Evaluation"

R. Schassburger, Rocky Flats Office

The Office of Southwestern Area Programs, Rocky Flats (RF) Branch, has reviewed the "Operable Unit (OU) 1 881 Hillside Area Phase III Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation Report Appendix E, Environmental Evaluation (EE)." Please address these comments before the document is finalized.

1. Our main concern with the document is that the EE Report does not indicate that the approach proposed for OU 1 has been validated. The conclusions and recommendations add little information beyond the initial set of preliminary observations. A major concern is the to demonstrate that lack of definitive justifications for demonstrating no effect from contamination. It is strongly recommeded that the conclusion that is to be drawn from this document be revised to this effect.

2. The EE Report does not appear to have any relationship to the Comprehensive Environmental Response, Compensation, and Liability Act process. The information obtained from this effort has not been developed and portrayed in a manner that could either support or refute the remedial decision process. This point is illustrated in Section E9.2, "Recommendations," where the discussion focuses upon resource planning issues rather than answering the questions — Is there an adverse impact to the biotic environment from contaminants released from RF Plant, and if so, are they of sufficient magnitude to warrant remedial action?

000020088

16812

MHS 10-5

DOE F 1325.8
(8-89)
EFG (07-90)

United States Government **Department of Energy**

# memorandum



DATE: - 5 1993

REPLY TO ATTN OF: EM-453 (J. Ciocco, 903-7459)

SUBJECT: Comments for "Operable Unit 1 881 Hillside Area Phase III Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation Report Appendix E, Environmental Evaluation"

TO: R. Schassburger, Rocky Flats Office

The Office of Southwestern Area Programs, Rocky Flats (RF) Branch, has reviewed the "Operable Unit (OU) 1 881 Hillside Area Phase III Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation Report Appendix E, Environmental Evaluation (EE)." Please address these comments before the document is finalized.

1. Our main concern with the document is that the EE Report does not indicate that the approach proposed for OU 1 has been validated. The conclusions and recommendations add little information beyond the initial set of preliminary observations. A major concern is the to demonstrate that lack of definitive justifications for demonstrating no effect from contamination. It is strongly recommeded that the conclusion that is to be drawn from this document be revised to this effect.

2. The EE Report does not appear to have any relationship to the Comprehensive Environmental Response, Compensation, and Liability Act process. The information obtained from this effort has not been developed and portrayed in a manner that could either support or refute the remedial decision process. This point is illustrated in Section E9.2, "Recommendations," where the discussion focuses upon resource planning issues rather than answering the questions — Is there an adverse impact to the biotic environment from contaminants released from RF Plant, and if so, are they of sufficient magnitude to warrant remedial action?

Please contact me at 301-903-8191 or Jeff Ciocco at 301-903-7459 if you have any questions regarding these comments.

Autar Rampertaap
Chief
Rocky Flats Branch
Rocky Flats/Albuquerque Production Division
Office of Southwestern Area Programs

Attachment

cc w/o attachment:
R. Greenberg, EM-453
S. Grace, RF

cc w/attachment
P. Singh, RF

**DOCUMENT REVIEW: OPERABLE UNIT 1**
**881 HILLSIDE AREA PHASE III RFI/RI REPORT**
**APPENDIX E ENVIRONMENTAL EVALUATION**

**GENERAL COMMENTS:**

1. Although the OU 1 habitat showed signs of environmental stress (a less diverse community relative to the reference site), it could not be exclusively attributed to contaminant exposure; these same effects could be expected as a result of physical disturbance. Thus, it seems that the variables assessed in the field investigation were inappropriate and untimely. Fieldwork was performed before development of a complete list of contaminants of concern and has resulted in an inability to say anything conclusive with regard to contaminant effects in the field along with a broad spectrum of potential tissue contaminants (i.e., the fieldwork focused on general indicators of environmental stress such as community composition and structure). The quantitative data obtained from biotic samples, however, could have served as the basis for validating the conclusions. The lack of numerical data in the conclusions raises questions concerning the value of the sampling, analysis, and modelling processes.

2. The inability to demonstrate the utility of this approach for the other Operable Units (OU) at Rocky Flats Plant (RAP) is a major concern. A major conclusion of this document should have addressed the suitability of the models and analyses for the Environmental Evaluation (EE) process. Discussions of verification/validation of pathway models should be emphasized in the document, because it is being proposed as the standard approach for all other OUs.

3. The study does not address its designed purpose to assess the likelihood of future adverse impacts resulting from site contamination.

4. The utility of this study for application to the Corrective Measures Study/Feasible Study process is not evident. The information obtained in this study should not only assist in the recognition of potential impacts but also should provide the basis for evaluating preferred alternatives and actions.

5. A major concern of the regulatory community is the potential effects of radionuclide contamination at RAP. The EE Report did little to make a convincing argument that radiological contamination does not represent a threat to the ecology of OU 1. This study is an opportunity to provide a strong statement that levels of radionuclide contamination at OU 1 should definitely not be a concern.

6. It is recommended that the value of a reference site be reexamined with regard to future ecological evaluations. The advantages of including such an approach in terms of analytical rigor must be weighed against the time and cost factors. The OU 1 experience provides an excellent opportunity for such an analysis.

7. The uncertainty section did not provide a rigorous discussion of the

uncertainties associated with this risk evaluation. The uncertainties associated with ecological risk evaluations in general as identified by Suter *et al.* (1987) were briefly discussed and related to the OU-1 evaluation but uncertainties unique to OU-1 were not discussed. For instance, the estimation of soil criteria was performed using aquatic models. This represents a major area of uncertainty that should be discussed. It is recommended that this section be reworked to provide the reader and the risk manager with a clear understanding of the limitations of the methodology and the confidence one should place on the results.

8. It is recommended that such terms as "obvious," "it is believed," and other forms of subjective interpretation be avoided when describing field and other investigations.

9. The document would benefit from a rigorous technical editing. Examples include the text in Sect. E6.3.1.2 (2nd sentence), which is contradicted by the referenced Table E6-4, or Section E10 References for which no Section E10 exists.

**SPECIFIC COMMENTS:**

1. Section E1.1: The Introduction should recognize that a Work Plan was developed for this study and served as the basis for its design and implementation. Deviations from the Work Plan should also be identified and recognized for their potential impact on the extent and scope of this study.

2. Section E4.1, p.E4-1: This section would be enhanced by the addition of a flow chart. It is not always clear in what order the criteria are applied. Also, it is unclear if the criteria were applied at an Individual Hazardous Spill Site (IHSS)-specific or OU-wide level.

3. Section E4.1.1.2, p. E4-2: The first paragraph identifies the first criteria in the Contaminants of Concern (COC) screen. If a contaminant is above background, the concentration is then compared to applicable or relevant and appropriate requirements (ARARs) and a risk-based level. These comparisons are only appropriate at this stage of the risk evaluation if all pathways have been included. For instance, a comparison to ambient water quality criteria (AWQC) as ARARs or risk levels could eliminate a contaminant on the basis of fish toxicity that is of importance to organisms feeding on the aquatic food chain. The exclusion of contaminants from the COC list on the basis of concentrations below ARARs may not be protective of all organisms. The second paragraph reports some additional criteria such as distribution. Application of a frequency of detection criteria during COC selection can potentially eliminate important, although not widespread, contaminants. This step should not be included. Further, the precise meaning of hot spot should be explicitly stated. Finally, it is unclear how the widespread distribution (i.e., the contaminant was detected in at least 20% of the total borings analyzed for that chemical) relates to the requirement that

a COC be detected in greater than 5 percent of the OU samples. It sounds as if frequency of detection is used twice as a criterion.

4. Section E4.1.1.3, p. E4-3: Ecotoxicity is presented here as a criterion used in COC selection. It is unclear why it is addressed separately as the previous section ("Extent of Contamination") included the comparison of observed concentrations to risk-based concentrations. Presumably the risk-based acceptable concentrations reflect ecotoxicity. Please indicate how these steps are different or delete this section.

5. Section E5.1.2.2, p. E5-6: Sediment quality criteria are calculated using EPA water quality criteria (WQC) on a contaminant-by-contaminant basis. Sediment can, however, enter the food chain and should be evaluated as such. Screening contaminants out on the basis of sediment quality criteria derived from WQC may exclude contaminants of importance to wetland organisms. This approach should be reevaluated.

6. Section E5.2.1, p. E5-10, first paragraph: Selenium is not essential for plant growth. It is, however, essential in the diet of animals. Please delete the sentence or revise.

7. Section E6.1.1.2, p. E6-4, third paragraph: Direct exposure and ingestion of radionuclide contaminated soil may be significant pathways for burrowing mammals. These pathways should be included in the analysis. Please revise.

8. Sections E9.2.2 and E9.2.3: Section E9.2.2 is a discussion of reclamation of remediated areas and should be removed from the document as it is clearly stated in Sect. E1.1 that the material presented in this document reflect conditions before the installation of the French Drain. In Sect. E9.2.2, the discussion of the enhancement of existing habitats should be removed. Both sections, however, are more appropriate for habitat management plans for RAP. Please revise accordingly.